

INTERNATIONAL SEARCH REPORT

International application No.
PCT/SE 2005/000054

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: A61K 31/4025, 31/155, 31/195, C07D207/26, 211/98, 401/12, 403/12, 215/00, A61P 19/00, 37/00, 21/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: A61K, C07D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-INTERNAL, WPI DATA, PAJ, STN-CAPLUS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 9963929 A2 (ADVANCED MEDICINE, INC.), 16 December 1999 (16.12.1999), formula I --	1-16
A	WO 9912912 A1 (YUHAN CORPORATION), 18 March 1999 (18.03.1999), formula I --	1-16
A	WO 9316992 A1 (MERRELL DOW PHARMACEUTICALS INC.), 2 Sept 1993 (02.09.1993), formula I --	1-16
A	EP 0325397 A1 (YAMANOUCHI PHARMACEUTICAL CO. LTD.), 26 July 1989 (26.07.1989), formula I --	1-16

☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

13 May 2005

Date of mailing of the international search report

17-05-2005

Name and mailing address of the ISA/
Swedish Patent Office
Box 5055, S-102 42 STOCKHOLM
Facsimile No. +46 8 666 02 86

Authorized officer

FERNANDO FARIETA/ELY
Telephone No. +46 8 782 25 00

INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 2005/000054

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>J. Am. Chem. Soc., Volume 117, 1995, James S. Nowick et al, "Molecular Scaffolds. 2. Intramolecular Hydrogen Bonding in 1,2-Diaminoethane Diureas", pages 89-99, see the whole document</p> <p style="text-align: center;">-- ----- .</p>	1-16

INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 2005/000054

WO	9963929	A2	16/12/1999	AU	764401	B	21/08/2003
				AU	4426399	A	30/12/1999
				AU	4426699	A	30/12/1999
				AU	4428899	A	30/12/1999
				AU	4430599	A	30/12/1999
				AU	4543699	A	30/12/1999
				AU	4543799	A	30/12/1999
				AU	4543899	A	30/12/1999
				AU	4551699	A	30/12/1999
				AU	4551799	A	30/12/1999
				AU	4551899	A	30/12/1999
				AU	4674599	A	30/12/1999
				AU	4677199	A	30/12/1999
				AU	4677399	A	30/12/1999
				AU	4818099	A	30/12/1999
				CA	2316999	A	16/12/1999
				CA	2318547	A	16/12/1999
				CA	2319080	A	16/12/1999
				CA	2319120	A	16/12/1999
				CA	2319474	A	16/12/1999
				CA	2319477	A	16/12/1999
				CA	2319495	A	16/12/1999
				CA	2319761	A	16/12/1999
				CA	2320241	A	16/12/1999
				CA	2320290	A	16/12/1999
				CA	2321162	A	16/12/1999
				CA	2321166	A	16/12/1999
				CA	2321190	A	16/12/1999
				CA	2321274	A	16/12/1999
				EP	0989857	A	05/04/2000
				EP	1003541	A	31/05/2000
				EP	1005356	A	07/06/2000
				EP	1083894	A	21/03/2001
				EP	1083919	A	21/03/2001
				EP	1083920	A	21/03/2001
				EP	1085845	A	28/03/2001
				EP	1085846	A	28/03/2001
				EP	1085861	A	28/03/2001
				EP	1085891	A	28/03/2001
				EP	1085893	A	28/03/2001
				EP	1086065	A	28/03/2001
				EP	1124528	A	22/08/2001
				EP	1143991	A	17/10/2001
				JP	2002517422	T	18/06/2002
				JP	2002517423	T	18/06/2002
				JP	2002517458	T	18/06/2002
				JP	2002517465	T	18/06/2002
				NZ	505979	A	26/09/2003
				SG	80631	A	22/05/2001
				SG	90053	A	23/07/2002
				SG	106036	A	30/09/2004
				US	5888001	A	30/03/1999
				US	6288234	B	11/09/2001
				US	6355810	B	12/03/2002
				US	6395724	B	28/05/2002

INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 2005/000054

WO	9963929	A2	16/12/1999	US	6566509	B	20/05/2003
				US	20020028943	A	07/03/2002
				US	20030176670	A	18/09/2003
				US	20040023290	A	05/02/2004
				WO	9963937	A	16/12/1999
				WO	9963939	A	16/12/1999
				WO	9963940	A	16/12/1999
				WO	9963988	A	16/12/1999
				WO	9963994	A	16/12/1999
				WO	9964032	A	16/12/1999
				WO	9964033	A	16/12/1999
				WO	9964037	A	16/12/1999
				WO	9964047	A	16/12/1999
				WO	9964048	A	16/12/1999
				WO	9964049	A	16/12/1999
				WO	9964051	A	16/12/1999
				WO	9964054	A	16/12/1999
				ZA	200004086	A	10/08/2001
				ZA	200004558	A	30/11/2001
				ZA	200004559	A	02/04/2002
				AT	198105	T	15/12/2000
				AU	4996693	A	03/03/1994
				DE	69329751	D,T	12/04/2001
				DK	606469	T	17/04/2001
				EP	0606469	A,B	20/07/1994
				GR	3035461	T	31/05/2001
				JP	7503090	T	30/03/1995
				NO	941141	A	20/05/1994
				US	6090726	A	18/07/2000

WO	9912912	A1	18/03/1999	AU	9005398	A	29/03/1999
----	---------	----	------------	----	---------	---	------------

WO	9316992	A1	02/09/1993	AT	165345	T	15/05/1998
				AU	663925	B	26/10/1995
				AU	3481893	A	13/09/1993
				CA	2130360	A,C	21/08/1993
				DE	69318136	D,T	22/10/1998
				EP	0626945	A,B	07/12/1994
				SE	0626945	T3	
				ES	2115756	T	01/07/1998
				IL	104780	A	30/10/1998
				JP	3309104	B	29/07/2002
				JP	7504190	T	11/05/1995
				KR	275843	B	15/12/2000
				MX	9300836	A	01/09/1993
				NZ	249032	A	25/09/1996
				US	5359131	A	25/10/1994
				ZA	9301035	A	17/09/1993

INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 2005/000054

EP	0325397	A1	26/07/1989	SE	0325397	T3	
				AT	93230	T	15/09/1993
				AU	627439	B	27/08/1992
				AU	2866989	A	05/10/1989
				CN	1021819	B,C	18/08/1993
				CN	1034538	A	09/08/1989
				DE	68908425	D,T	23/12/1993
				DK	22289	A	21/07/1989
				ES	2059714	T	16/11/1994
				HU	50116	A	28/12/1989
				HU	207843	B	28/06/1993
				IE	63207	B,L	05/04/1995
				IE	890179	L	20/07/1989
				JP	1119455	U	14/08/1989
				JP	2117651	A	02/05/1990
				MX	9203657	A	31/07/1992
				US	5091419	A	25/02/1992
				US	5166429	A	24/11/1992
				US	5227492	A	13/07/1993
				US	5384425	A	24/01/1995

INTERNATIONAL SEARCH REPORT

International application No.
PCT/SE2005/000054

Box No. II Observations where certain claims were found unsearchable (Continuation of Item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 14-16
because they relate to subject matter not required to be searched by this Authority, namely:
Claims 14-16 relate to a method of treatment of the human or animal body by surgery or by therapy, as well as diagnostic methods /Rule 39.1(iv). Nevertheless, a search has been executed for these claims. The search has been based on the alleged effects of the compounds. .
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of Item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/SE 2005/000054

Box No. IV Text of the abstract (Continuation of item 5 of the first sheet)

The present invention relates to novel diurea derivatives that block intracellular signal transduction and thereby inhibit the production of pro-inflammatory cytokines, especially interleukin-2 (IL-2) and/or induce apoptosis in activated T-cells. It further discloses such a compound for use as a medicament, the use of said compound for the manufacturing of a medicament for the treatment of immune disorders which benefit from inhibition of production of IL-2 and other pro-inflammatory cytokines and/or induction of apoptosis in activated T-cells, a pharmaceutical composition comprising said compound and a method of treatment comprising administration of a pharmaceutically effective amount of said compound.

A compound of the general formula I

